0065

Incoming C0150025

From: Mark Reynolds <mreynolds@etv.net>
To: Joe Helfrich <joehelfrich@utah.gov>
Date: 10/5/2006 5:22:18 PM
Subject: Bear Canyon Lease Addtion FS comments

Joe.
I am sending you this email in addition to the copy of the FS comments that I sent you. The first email includes all pages that addressed the FS comments. This only includes the pages that were changed for the FS comments and not DOGM deficiencies. Basically, If you take this email along with all the others I sent directly to you, it will make a complete copy of all pages changed. The copy that was sent to the Forest Service included these pages as well as pages I already submitted to you. All of the pages attached to this email are Chapter 3 pages about biology except Page 7-49. If you have any questions please call me.

Mark Reynolds (PE)
Environmental Engineer
C. W. Mining Company
P. O. Box 300
Huntington, Ut 84528
435-687-5777

CC: Wayne Hedberg <waynehedberg@utah.gov>

Literature pertaining to the amphibians and reptiles is extensive, but much of it refers to species occurring in the desert areas and has only limited reference to forms inhabiting high elev in Utah. Most of the publication dealing with species lists for the state are old.

The most up-to-date listing for the area under consideration may well be a checklist of Utah amphibians and reptiles (Tanner, 1975), and Utah Division Publication No. 78-16 (Dalton, 1978) (Appendix 3-K) which references a contiguous and similar geographic area.

Amphibians. Based on the literature review, it was determined that probably six species of amphibians inhabit the proposed area of concern which provides substantial value habitat for the three species listed, the Great Plains Toad, Great Basin Spadefoot, Woodhouse's Toad, . All amphibians are legally protected in Utah, but since the species listed are all widespread throughout similar habitats in Utah, none are treated as high interest species, and therefore, are not individually discussed.

Reptiles. Based on a review of the literature, it was determined that probably 18 species of reptiles occupy the expansion area; this area is considered to be a substantial value habitat for all species. All reptiles have some protection under the Utah code, but since the species listed are all widespread throughout similar habitats in Utah, none are treated as high interest species and, therefore, are not individually discussed.

Appendix 3-I contains a more detailed discussion of amphibian and reptile species.

[1]V. Tanner, Amphibians, 1931; Woobury, Reptiles, 1931, and Pack, Snakes, 1930

[2]Other recent literature pertinent to this report are: Schmidt (1953); Stebbins (1954 and 1966); W. Tanner (1953, 1957 a and b, 1966 with Banta, 1969 with Morris and 1972 with Fisher and Willis); and Woodbury (1952).

Listed or Proposed Endangered or Protected Species of Plants and Animals

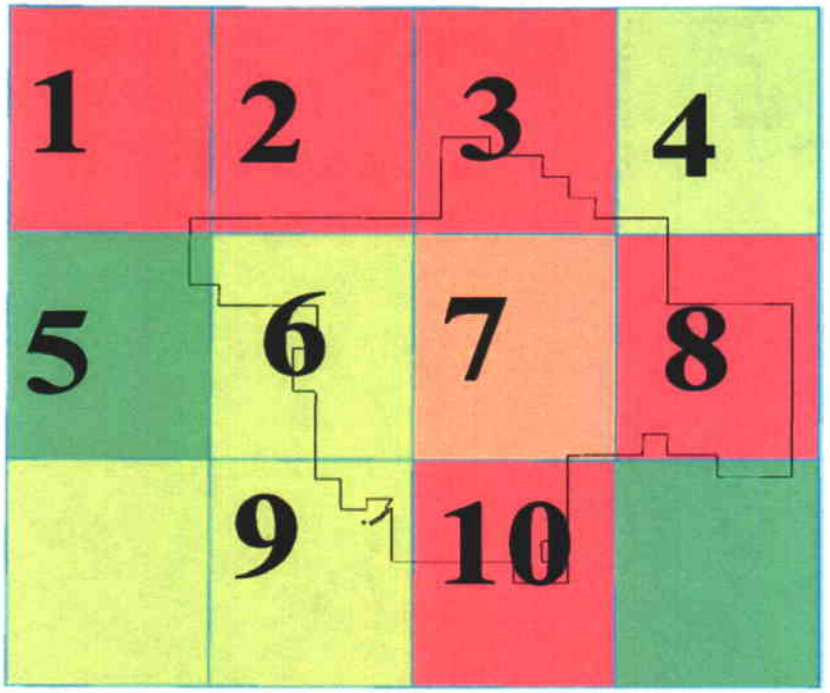
The list of Utah Sensitive Species for Emery county created May 12, 2006 by the Utah Division of Wildlife Resources (DWR) is shown below. This includes federally listed threatened and endangered species.

Common Name	Scientific name	Status
Jones Cycladenia	Cycladenia humilis var jonesii	T
Maguire Daisy	Erigeron maguire	T
Last Chance Townsendia	Townsendia aprica	T
Barneby Reed-mustard	Schoenocrambe barnebyi	E
San Rafael Cactus	Pediocactus despainii	E
Winkler Pincushion Cactus	Pediocactus winkleri	T
Wright Fishook Cactus	Sclerocactus srightiae	E
Humpback Chub	Gila cypha	E
Bonytail	Gila elegans	E
Colorado Pikeminnow	Ptychocheilus lucius	E
Razorback Sucker	Xyrauchen texanus	E
Bald Eagle – Breeding	Haliaeetus leucocephalus	T
Mexican Spotted Owl	Strix occidentalis lucida	T
Southwestern Willow Flycatcher	Empidonax traillii extimus	E

A map showing blocks with lists of Utah sensative species was also downloaded from DWR's web page. (See figure 3-1)

In 2004 C. W. Mining meet with DWR and based on this map it was determined that due to elevation the only possible species of concern for the permit area was the Townsend's Big-eared Bat. DWR also stated that they anticipated the addition of the Flamulated Owl to the threatened and endangered species list in the near future and that it may also be a species of concern.

In order to address these concerns C. W. Mining conducted a bat and owl survey and determined that neither of these species were located in the permit area. The results of this survey can be found in Appendix 3-M



See T&E Species List

Figure 3-1 Utah Sensitive ~~Endangered Mammalian~~ Species in Relation to Permit Area
(created by the Utah Division of Wildlife Resources May 3, 2006)

T & E Species List

Block 1
Bald Eagle (Haliaeetus leucocephalus)

Block 2
Northern Goshawk (Accipiter gentilis)
Greater Sage-grouse (Centrocercus urophasianus)
Canada Lynx (Lynx canadensis)

Block 3
American Three Toed Woodpecker (Picoides dorsalis)
Townsend's Big-eared Bat (Corynorhinus townsendii)
Greater Sage-grouse (Centrocercus urophasianus)
Canada Lynx (Lynx canadensis)

Block 4
Western Toad (Bufo boreas)
Ferruginous Hawk (Buteo Regalis)

Block 5
Bonneville Cutthroat Trout (Oncorhynchus clarkii utah)
Columbia Spotted Frog (Rana luteiventris)
Western Toad (Bufo boreas)

Block 6
Northern Goshawk (Accipiter gentilis)
Greater Sage-grouse (Centrocercus urophasianus)
Canada Lynx (Lynx canadensis)

Block 7
Northern Goshawk (Accipiter gentilis)
Greater Sage-grouse (Centrocercus urophasianus)

Block 8
Ferruginous Hawk (Buteo Regalis)

Block 9
Greater Sage-grouse (Centrocercus urophasianus)

Block 10
Wright Fishhook Cactus (sclerocactus wrightiae)
Winkler's Pincushion Cactus (Pediocactus winkleri)
Bluehead Sucker (Catostomus discobolus)
Black-footed Ferret (Mustela nigripes)
Bald Eagle (Haliaeetus leucocephalus)
Greater Sage-grouse (Centrocercus urophasianus)

There are no endangered or threatened species of mammals in the mine plan area, nor are there any in proximity close enough to be considered ~~(Figure 3-1)~~. Co-Op is committed to notify the Division in the event any T & E species were observed on the permit area, as well as any critical habitat.

Official U.S. Fish and Wildlife Service Section 7 opinions relating to the aquatic resources of Huntington and Eccles Canyon drainages have indicated that no threatened or endangered species of fish or other aquatic organisms have been found in waters upstream of the lowest 2 or 3 mi of the Price or San Rafael rivers. The organisms of Trail Creek, as presently known, are all common and widely distributed throughout streams of Utah. The aquatic organisms of Bear Creek have representatives of several taxonomic classifications that are limited to low quality environs, but none, as far as is presently known, are rare in the inter-mountain region.

~~One~~Several species of ~~endangered~~sensitive raptors~~, the peregrine falcon,~~ may be found in the mine plan area. Known raptor nest sites within the permit area are shown in Appendix 3-L and on Plate 5-3A,. ~~according to a survey conducted by the Raptor Biologist from the U.S. Fish and Wildlife Service.~~

According to the Utah Division of Wildlife Resources report, there are ~~forty-six~~fifty-eight current or old raptor nest locations within or near the permit area. The location of the nests are shown on Plate 5-3A and a description of them and of the raptor surveys is in Appendix 3-L.

No plant species listed as threatened or endangered (U.S. Fish and Wildlife Service, 1982) or proposed for threatened or endangered status (Welsh and Thorne, 1979) was observed on the study area. No plants listed as threatened or endangered are known to occur in the Co-Op permit area (Thompson, personal communication, 1983). The U.S.D.A. Forest Service identified no threatened or endangered plants in their correspondence dated 29 Jan 1991 (Appendix 3-B). A survey on November 4, 1993 by Robert M. Thompson, USFS Botanist, revealed no threatened or endangered species within the proposed road extension area for the Tank Seam (letter, Appendix 3-B).

A sensitive species, Canyon Sweetvetch (*Hedysarum Occidental* Var *Canone*), was identified within and adjacent to the Bear Canyon disturbed area. Populations were found to be high, especially in the areas on Federal Lease U-024316. Information on this species is presented in Appendix 3-E. Locations of these plants are shown on Plate 3-1 and 3E-1. And is discussed in Appendix 3-F, populations were also observed within portions of the proposed Wild Horse Ridge disturbed area, and in the lower portion of Fish Creek outside the permit boundary. Where these plants are located, Co-Op will avoid disturbing them to the extent possible during and subsequent to construction.

In order to re-establish the species in this area upon final reclamation, the topsoil stockpile will be seeded with the species to establish a community on the stockpile. This seed will be obtained from the Canyon Sweetvetch communities located in upper Bear Creek, shown on Plate 3E-1. During the season prior to final reclamation, seed will be harvested from the community established on the topsoil pile, as well as from the other communities within Bear

Canyon. These seeds will be incorporated into the seed mix during seeding following the topsoil redistribution.

Link Trail Columbine (*Aquilegia flavescens Var. rubicunda*) also classified as a sensitive species, has been found in three locations in Bear Canyon. The first location is in the vicinity of Big Bear Spring. The second location is in the riparian area of the right fork of Bear Canyon, located below spring SBC-14 near the Wild Horse Ridge Coal Storage Bin. The third site is at the confluence of Bear Creek and the right fork of Bear Creek. The third location is the only sight proposed to be disturbed, where two specimens were~~are~~ observed. The plant was also found in the lower portions of Fish Creek below the permit boundary. Where these plants are located, Co-Op will avoid disturbing them to the extent possible during and subsequent to construction.

322.220 Habitats and Areas of High Value

These areas are shown on ~~Plate 3-2~~. The main areas of high value for vegetation are the riparian areas around springs and streams. These areas extend approximately 0-100 ft. from spring sources. They also occur intermittently along a 30 ft. corridor in the right fork of Fish Creek starting at a point 1,637 ft. west and 1,151 south of the northeast corner of section 18 T16S R8E, and extending past the permit boundary.

Due to the depth of overburden no impact to these areas is expected. Since these area are dependent on the springs and streams within them any impacts to them will be the result of loss of water flow. The water monitoring plan outlined in Chapter 7 will catch any impacts to the water flow. If an impact is noticed the land owner and the Division will be consulted and a site specific mitigation plan will be developed. A detailed discussion of subsidence impacts and protection methods is included in Appendix 5C.

Areas of high value for wildlife include deer and elk calving, fawning, and grazing areas, as well as areas of habitat for Black Bears, Bobcats, and Mountain Lions. All information available on these areas are shown on Plates 3-2, 3-3, 3-4, and 3-5. A more detailed discussion of habitats and areas of high value can be found in Appendix 3-I. Appendix 3-K includes a mitigation plan addressing possible impacts to wildlife.

In order to eliminate the potential of coal fines migrating to surface waters, this area was added into the disturbed area boundary in 1992. Runoff will be directed to sediment ponds, see R645-301-742.300. Areas in Bear Canyon surrounding the mine site will be routinely monitored and additional preventative and/or control actions will be taken if additional affected areas are identified.

Waste dumping or other disturbance on undisturbed areas is not permitted. Disturbed area perimeter markers delineate the boundaries of disturbance. Employees are trained not to dump or otherwise disturb areas outside those boundaries.

Renewable vegetative resources exist within the wild Horse Ridge subsidence zone in the form of timber and grasslands which are used for grazing. As discussed in Appendix ~~3~~5-C, minimal detectable subsidence is expected on the surface. Past experience has shown that tension fractures which result from subsidence are localized and minimal, so these resources should not be impacted. Further discussion is contained in Appendix ~~3~~5-C.

Mitigating Measures to be Employed to Reduce Impacts on Vegetative Resources

All recontoured areas will be planted and revegetated during the first appropriate season following grading and redistribution of topsoil. This program will include any necessary addition of remedial treatments to the soil. A suitable, permanent and diverse vegetative cover has been selected on the basis of appropriate land management agency requirements and will be established on all reclaimed areas. The schedule of the program is presented in R645-301-

could increase mortality and reduce reproductive success temporarily, but the effect would be temporary because of the continued survival of the breeding population in contiguous areas and to the high densities of these species.

Birds. Only one species found in the vicinity of the mine permit area is on the endangered species list: ~~The peregrine falcon is not known to nest within the permit area.~~ However, several sensitive species may be present. The Golden Eagle is found on escarpments in and around the permit boundary which is a USFS Management Indicator Species.

Potential impact on bird species would be escarpment failure and loss of riparian habitats. No loss of riparian habitat is expected. Escarpment failure and protection of escarpments and riparian areas inside the affected area are discussed in Appendix 5C.~~limited to the proposed new construction areas. Impacts, however, should be minor since the areas involved are small and since equivalent habitat is readily available close by~~. (See Raptor Survey UDWR -- Appendix 3-I).

~~Prior to construction of surface facilities, Co-Op will work with the UDWR in developing a mitigation plan for potential impacts to raptor nest utilization in the vicinity of Wild Horse Ridge.~~

Amphibians. The three amphibians occurring in the permit area occupy similar habitats throughout the region and are unlikely to be affected in any major way by planned activities.

Reptiles. Reptiles found in the permit area are located in many other similar habitats and their populations will not be seriously impacted by planned activities. UDWR personnel will be notified if any denning sites are discovered during mining or construction.

Aquatic Wildlife. Since there are no high quality streams in the surface operation areas, little impact to aquatic wildlife is expected. Huntington Creek, the closest high quality stream to the permit boundary, is located a considerable distance from the surface operation, 1.5 miles. This high quality fishery is protected through Co-Op's Sediment Control Structures (R645-301-742.300).

In addition, Co-Op has agreed that in the event that escarpment failure due to subsidence impacts any raptor nests within the permit area, that Co-Op will notify UDWR and the U.S. Fish and Wildlife Service and take whatever action is recommended in order to mitigate such loss. ~~At this time no raptor nest are at risk due to their absence from all areas of potential impact. Raptor nests will be safeguarded from subsidence by maintaining a min of a 100' barrier to the outcrop.~~ In areas where raptor nest may be impacted C. W. Mining will try to adjust their timing so that these areas will not be undermined during the nesting season. In the event we are unable to do this obstructions such as fencing will be placed over the nest to prevent them from being used. If a nest is lost due to escarpment failure C. W. Mining will get a take permit for the nest and the impact will be mitigated. This mitigated will most likely be replacing the nest with an artificial nest, or expanding on the raptor prey base study included in Appendix 3N.

UDWR authorities will be consulted, in the event a need for pesticides becomes necessary to control rodents or insects during reclamation. No control measures will be used without prior approval by all parties concerned.

In order to mitigate a possible impact to a red tail hawk nest during the WHR construction DWR required C.W. Mining Company performed a Raptor prey base study in 2005. The results of this study are included in Appendix 3N. ~~will require some mitigation for the loss of Big Game Habitat and for the potential loss of raptor nesting during the construction and operation of the facilities. C. W. Mining Company is working with the Division of Wildlife Resources to develop a raptor prey base study and will complete the study in the summer of 2003 for mitigation.~~

In the event that a crack forms that interferes with any migratory paths, C.W. Mining will seal the cracks in a method acceptable to the land owner.

Stream Buffer Zone

Current surface facilities are in the upper reaches of the Bear Creek drainage, which is a tributary of Huntington Creek drainage. Appropriate sedimentation ponds have been constructed. This coupled with coal pile drainage ditches, clear water diversion, water bars, and wind erosion control measures within the permit area disturbed areas, will assure protection from mining impact of aquatic resources far downstream from the mine. Thus, no aquatic biological community determinations have been made relative to surface activities. Stream buffer zones are established along Bear Creek as determined by DOGM to insure protection of the stream channel. Stream buffer zone signs are in place at approximately 200 foot intervals along Bear Creek.

FISH AND WILDLIFE MONITORING

Bear Creek does not warrant a biological or habitat monitoring effort since it is naturally of poor quality. Water quality will be monitored as outlined in R645-301-731.200. Data collected will be correlated with water quality and hydrology measurements discussed in R645-301-731.200. If subsidence should become evident in the drainage area that contributes to Bear Creek or Fish Creek, monitoring of aquatic macroinvertebrates and habitat changes will be instated using approved methodology to collect data as the base for impact evaluation. Plate 7-4 shows all water monitoring sites used to determine impacts to flows and watersheds.

Co-Op has monitored all existing power transmission lines in order to determine use by raptors. No use was observed, Co-Op will take all necessary measures to ensure the poles and/or

and to ensure that no impacts occur. Springs above the mine will be monitored for field parameters, since the potential for impact to these springs is quantity rather than quality. SBC-9A and SBC-4 will be monitored for lead quality.

Groundwater monitoring will follow the ground water sampling guidelines as shown in Table 7-12 using the water quality parameter list in Table 7-13. These tables follow the recommendations presented in Appendix 7-J. New significant occurrences within the present permit area will be promptly included in the sampling program, as specified by state requirements. Operational ground water monitoring will continue through reclamation to Bond Release.

The sampling matrix for each of the existing monitoring stations during the operational phase of mining is included in Table 7-14. ~~No baseline data is available for SBC-17, but will be collected in 2000 and 2001, prior to mining occurring within the vicinity of this spring.~~ Baseline samples were collected for SBC-14, SBC-15, SBC-16, SBC-17, MW-114 and MW-117 in 2001. Three years of baseline will be collected on all additional sites added after 2001.

Temporary Drill Hole Seals. Within 30 days of completion, drill holes utilized for groundwater monitoring will be sealed in a nonpermanent fashion by installing PVC surface casing with a threaded cap for access.

Annual Report. An Annual Report evaluating all data collected for the year will be submitted to DOGM as required.